REMARKS

The final Office Action of July 6 2009 and the Attachment to Advisory Action of 18 November 2009 have been carefully considered. It is respectfully submitted that all issues raised are traversed, being hereafter addressed with reference to the relevant headings appearing in the Detailed Action section of the Office Action.

Claims 1, 13, 17, 24, 27, 32, 35, 39, 42, and 44 have been amended.

Claim Rejections – 35 USC § 103(a)

The Examiner has rejected claims 1-20, 22-25, 27-30, 32, 35-39, 42-44 and 47 as being unpatentable over Hanagan (US 2001/0056362) in view of Gangopadhyay (US 6,973,638). Furthermore, the Examiner has rejected claims 21 and 31 as being unpatentable over Hanagan and Gangopadhyay in view of Rigole (US 7,139,728 B2). The Examiner has also replied to our arguments submitted with our Amendments filed on 6 November 2009 in response to the Office Action, maintaining the rejections.

In order to assist the Examiner's understanding of this matter, the field of the invention will now be discussed. In general, the user of a system in the field of the invention is allowed to implement a sequence of service portions from different service providers, or entities, from a convenient single interface, by defining a combination of components which each represent respective service portions offered by respective entities.

When defining the component combination, the user is able to select from a plurality of different components, these different components can represent services provided by different entities. The user is also able to select from multiple components representing equivalent services provided by different entities, which offers the user a choice in selecting components based on factors other than the particular service portion provided, such as the reputation of the entity providing the service, speed of service etc. This helps to promote competition between entities providing the service portions.

In addition, the user is able to define the interconnections between the components so that the components transfer data between one another in accordance with the definitions, allowing

the user to tailor the sequence of service portions to meet their particular needs. In other words, by defining interconnections the user is able to authorize communications between selected components so that those components can cooperate with each other.

The user is therefore able to fully define the sequence of services portions by defining the component combination and interconnections through a single interface, without requiring any direct interaction with the entities providing the services, thereby simplifying the process of obtaining complex services.

The Examiner has cited Hanagan as the primary reference in the rejections of the claims. However, we respectfully submit that the system of Hanagan is fundamentally different from the claimed invention, in that Hanagan discloses a software system with functionalities distributed between software modules or components and communication occurring over well-defined interfaces (see paragraphs [0087] and [0294]), whereas, in the claimed invention, service portions are implemented by entities in accordance with a combination of components with user defined interconnections, in which the components represent the entities that provide the service portions.

In the claimed invention, the respective entities can implement the service portions automatically by software performing a manipulation on data, manually by a human operator, or by a combination of automatic and manual processes. For examples, see page 14 lines 14-22 and page 15 of the specification. Irrespective of the implementation method used in the entity, the components allow the user to define a sequence of service portions without needing to interact directly with the entities, providing the user with a way of defining new and potentially complex sequences of services that can be implemented by a number of distributed entities. Furthermore, each entity can provide service portions to a number of implementations, such that multiple different component combinations can use the services offered by a single entity. In contrast, the components of Hanagan do not represent service providing entities, but are software modules which directly perform assigned functionalities, and each deployed instance of a system according to Hanagan requires its own instances of the software modules.

Although Hanagan shows interconnections between components, the component topology in Hanagan does not define a sequence of service portions to be provided by respective entities. Instead, the modules of Hanagan provide for a distribution of functionality that may be used

to provide services, but the particular sequence of services is not represented by the particular combination.

The claimed invention is capable of being used to define and implement new sequences of services by defining new combinations of components and interconnections. In contrast, the particular sequence of services available in Hanagan has no relation to the combination of components, but is instead a result of the functionalities provided by the components in the static topology.

The Examiner has asserted that Hanagan shows that a user is able to define a component combination by selecting whether to use legacy or new components in a system. However, the choice offered to the user in this case is limited to whether to retain or replace an existing module with a new one. In either case, the legacy system or new module will be software providing the associated functionality, and not a component representing a service provided by an entity. The substitution of components in Hanagan does not allow the user to select from different components provided by different entities.

In order to highlight the above discussed distinctions over Hanagan, claim 1 has been amended such that claim 1 now includes step a) which requires, in relevant part, the method including causing the processing system to:

> "*Provide component specifications to the user for a plurality of different components, the component specifications representing the respective service portion associated with the corresponding component, and at least some of the different components being provided by different entities, thereby allowing the user to select respective ones of the components*".

The amendment to claim 1 is based on similar limitations defined in claims 5 and 21 and we submit that no new matter has been added as a result. Similar limitations have been incorporated into the independent claims 24, 27, 32, 35, 39, 42 and 44.

We also submit that the other cited references, Gangopadhyay and Rigole, do not show the features of the amendments discussed above. We note that Gangopadhyay has been cited to show user-defined interconnections. However, we submit that Gangopadhyay is not relevant

to the features of allowing the user to select from different components provided by different entities.

With respect to Rigole, this reference has been cited as being relevant to claim 21 and 31, as disclosing the feature of allowing a user to select a service provider. However, Rigole relates to the selection of overall services and not service portions as claimed. The Examiner has asserted that the motivation to combine the references comes from Rigole, but it is submitted that the skilled person would not be motivated to combine the teachings in this way. If the skilled person sought to improve the system of Hanagan, it is submitted that the skilled person would not seek to allow the user to select from different components provided by different service providers, as Hanagan teaches towards providing a convergent system with a fixed architecture. Hanagan allows legacy systems to be substituted instead of system components, but Hanagan does not teach towards allowing users to choose from different components, as the intention of Hanagan is to provide a convergent total system for a service provider to use for customer care and billing. Selecting from different service providers as shown in Rigole therefore goes against the teaching of Hanagan, and therefore it is respectfully submitted that the skilled person would not modify Hanagan in view of Rigole.

We respectfully submit that the distinctions highlighted by the amendments to claim 1 render the Examiner's reasons for rejection moot.

Despite this, we submit the following further arguments for the Examiner's consideration, which highlight additional distinctions.

In our previous response, it was also submitted that Hanagan does not show that "*each service request includes an indication of the interconnections of the respective component*". We note that the Examiner has responded to our previous arguments at item 3 of the Attachment to Advisory Action, arguing that, in Hanagan, selecting which new components will be implemented and which legacy components will be kept is in itself an indication of the interconnections of the respective components.

However, we respectfully disagree with the Examiner on this point. Although we acknowledge that an interconnection may or may not exist as a result of the selection of which components will be implemented, the Examiner's argument is related to the definition

of interconnections between components, and does not relate to indications of the interconnections included in service requests transferred to entities requesting the performance of service portions when the components are implemented.

The service requests referred to in claim 1 are specifically involved in the implementation of the components by respective entities. Each entity implementing a service portion requires an indication of the interconnections defined in the component combination to be provided as part of a request to provide the particular service portion required by the component combination. Thus, the service request allows the entity to subsequently interface with other entities which will implement service portions represented by other interconnected components. Such details of the interconnections need to be provided to the entity, because each time the entity implements a service portion the service portion may be required in a completely different sequence of service portions represented by a completely different component combination, and therefore the entity must be able to handle dynamic interconnections with other entities.

On the other hand, when functionalities or services are performed by the components that make up the system of Hanagan, the relationships between the components, and hence the details of the interconnections, are fixed once the topology is finalised. With reference to the modularity scenario examples of Hanagan in paragraphs [0089] to [0096], it is submitted that the system integration in each of these examples will involve initial configuration of the components, or the standardised interfaces, so that the components are integrated to operate correctly in the selected topology. It is submitted that the respective interconnections between each component would form part of the initial configuration of the components. Therefore the transfer of data between the components of Hanagan would follow the static arrangement of components as defined in the system topology, and it is submitted that the skilled person would realise that no further details of the interconnections of respective components would need to accompany any requests for functionalities or services from components.

In the rejection of claim 1, the Examiner has also referred to the specific example of Hanagan in paragraph [0081] regarding the operation of the Order Processing component, asserting that the claimed service request features are disclosed in that example. However, we submit that the requests to activate network elements controlled by the Order Processing component in the example are not equivalent to the service requests referred to in claim 1, as the service

requests of Hanagan do not request a service portion represented by a corresponding component to be performed. Instead, the service request of Hanagan requests activation or connection of a network element entirely separate to the components, such that the network elements do not have corresponding components. Furthermore, Hanagan does not suggest that the requests in the example include any information about the interconnections.

Accordingly, we submit that Hanagan does not disclose the recitation of claim 1 in which "*a service request is transferred to each entity requesting the respective service portion to be performed, and wherein each service request includes an indication of the interconnections of the respective component*".

Similar arguments apply to claims 24, 27, 32, 35, 39, 42 and 44, which recite similar distinguishing features as those discussed above with respect to claim 1.

We note that the proposed amendment to claim 47 was not entered following our previous response as the Examiner asserted that the subject matter of the amended claim 47 would require further search and or consideration. Accordingly, consideration of the amended claim 47 is again requested with the following arguments as per the previous response.

Regarding claim 47, which relates to agents that negotiate with agents of other components, the Examiner has interpreted the standardized interface disclosed in Hanagan as also being equivalent to an agent, and has asserted that the limitations of claim 47 are shown.

Hanagan describes that the interconnections between components are by way of standardized interfaces, which are introduced in paragraph [0087] as follows:

> *"Because each component must also enable ease of integration with legacy systems, standardized interfaces are provided for each component, where the interface includes all information that is needed by the sending and receiving system. All interfaces are built into the invention object model as separate objects."*

It is submitted that a skilled person would understand that these standardized interfaces are provided so that the components can communicate with another component (based on the static interconnections) or an equivalent legacy system. For example, a legacy component can

be integrated into the system of Hanagan using a standardized interface (such as per the specific example in paragraph [0090]), so that the legacy component can communicate with another component without requiring modification. In other words, the interfaces are standardized based on the nature of the legacy system to allow the component to interpret data received therefrom or provide data thereto.

Hanagan explicitly describes that the standardized interfaces are provided to ease integration. A skilled person would therefore realise that the aim of using standardized interfaces is to enable the overall system to perform its customer care and billing functionalities regardless of whether new components or legacy systems are used to perform the underlying functions.

We respectfully submit that the Examiner appears to have attributed claimed functionalities to the standardized interfaces of Hanagan which are not explicitly described or even suggested, but have generally been inferred by the Examiner without justification. For example, the Examiner has asserted that the standardized interfaces represent interconnections which define the transfer of data between the entities of the respective components (claim 1), are equivalent to agents which can cooperate with other agents (claim 16), and that they can also negotiate with agents of other components (claim 47). However, Hanagan is silent as to the actual configuration of the standardized interfaces, other than the description of paragraph [0087] duplicated above. It is submitted that Hanagan does not provide sufficiently enabling disclosure to allow a skilled person to carry out the claimed functionalities of claim 1, 16 and 47.

In any event, the communication between components in Hanagan relies on the static architecture defining the components and the predetermined interconnections between them, and each component is specifically designed to allow communications along those predetermined interconnections. The use of standardized interfaces does not alter this fact; rather the standardized interfaces merely provide a way to easily integrate legacy components into the system, without necessitating redesign of the legacy components. Accordingly, the standardized interfaces are configured to allow communication with component in a standard way. It follows that the data types or formats for data transfer between the standardized interfaces would themselves be standardized.

On the other hand, claim 47 requires that each agent negotiates with the agent of another component. In order to further define how each agent negotiates with the agent of another component, claim 47 has been amended to recite that:

> "*each agent negotiates with the agent of another component in accordance with the defined interconnections to select between available data types and formats and to thereby allow data to be transferred between the ports.*"

Support for this amendment can be found at page 17, lines 18-22 of the original specification. The recitation of claim 47 allows components to negotiate to choose a common data type or data format that both components are able to use to communicate. This common data type or format may vary depending on what components are connected. In contrast, Hanagan enforces compliance with standard formats to ensure that common types/formats are used by each component, legacy or otherwise, without requiring any negotiation to occur to enable the data transfer. Therefore it is respectfully submitted that negotiation "*to select between available data types and formats*" is not disclosed or suggested by Hanagan, nor could such negotiation inherently take place in a system as described by Hanagan.

Accordingly, it is respectfully submitted that Hanagan does not show the features of claim 47, and therefore claim 47 is novel and non-obvious over Hanagan.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the present application is believed to be in condition for allowance. Accordingly, the Applicant requests a Notice of Allowance of all the claims presently under examination.

The Commissioner is hereby authorized to charge the total amount of $895.00 consisting of $405.00 for the Request for Continued Examination fee and $490.00 for the Three-Month Extension of Time fee (minus one-month previously paid), for small entity, to Deposit Account No. 07-1896. The Commissioner is further authorized to charge any additional fees that may be due, or make any credits, to Deposit Account No. 07-1896 referencing the above-identified attorney docket number.

Respectfully submitted,

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/J.D. Harriman/

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